

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1. (Currently amended) [[::]] A blood treatment device having comprising a blood purification element {1} which is divided into two chambers by a semipermeable membrane {3}, its with a first chamber {4} being part of a dialysis fluid circuit {20} and its a second chamber {2} being part of an extracorporeal blood circuit {10},

having a dialysis fluid inlet line {22} which leads from a dialysis fluid processing unit {21} to supply fresh dialysis fluid to at least one of the first chamber {4} and/or and directly into the blood circuit {10},

having a dialysis fluid outlet line {23} for removing spent dialysis fluid from the first chamber {4},

having a blood inlet line {11} for supplying blood to the second chamber {2},

having a blood return line {12} for returning blood from the second chamber {2},

having a control unit {34} for controlling the blood treatment device,

having an analyzer unit {32} which is connected to the control unit {34}, and

having at least one sensor {31} which is connected to the analyzer unit {32} on at least one of the blood circuit {10} or and the dialysis fluid circuit {20} for detecting the concentration of a substance which is capable of penetrating through the semipermeable membrane {3},

~~whereby the analyzer unit {32} is suitable for determining being configured (i) to determine on the basis of the measured detected values of the at least one sensor {31} the concentration Cbi of this the substance in the blood in the blood inlet line {11}, the instantaneous transfer rate $\Delta M/\Delta t$ of this the substance through the membrane, {3} and the total quantity M of this the substance withdrawn through the membrane {3} during the treatment, whereby (ii) to store a first admissible value range for the blood concentration Cbi of the substance, a second admissible value range for the transfer rate $\Delta M/\Delta t$, and a third admissible value range for the total quantity M of the substance to be withdrawn are stored in the analyzer unit {32}, and whereby the analyzer unit {32} is designed so that it instructs (iii) to instruct the control unit {34} to the extent such that the blood treatment device performs the blood treatment while maintaining all three of the admissible value ranges.~~

Claim 2. (Currently amended) [[:]] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the at least

one sensor {31} is provided in the dialysis fluid outlet line {23} for determining ~~the a~~ concentration Cdo.

~~Claim~~ 3. (Currently amended) [:] The blood treatment device according to Claim 2, ~~characterized in that~~ wherein a second sensor is provided in the dialysis fluid inlet line {22} for determining ~~the a~~ concentration Cdi of the substance and is also connected to the analyzer unit {32}.

~~Claim~~ 4. (Currently amended) [:] The blood treatment device according to Claim 2, ~~characterized in that~~ the wherein a concentration Cdi of the substance in the dialysis fluid inlet line {22} is predetermined by at least one of the control unit {34} ~~and/or and~~ the analyzer unit {32}.

~~Claim~~ 5. (Currently amended) [:] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the substance is potassium.

~~Claim~~ 6. (Currently amended) [:] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the second value range extends from zero up to a maximum value.

~~Claim~~ 7. (Currently amended) [:] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein a target

value Mend which is within the third value range is stored in the analyzer unit {32} for the total quantity of the substance to be withdrawn.

Claim 8. (Currently amended) [:] The blood treatment device according to Claim 7, ~~characterized in that~~ wherein the analyzer unit {32} instructs the control unit {34} that the target value Mend has been reached after a planned treatment time.

Claim 9. (Currently amended) [:] The blood treatment device according to Claim 7, ~~characterized in that~~ wherein the analyzer unit {32} instructs the control unit {34} that on reaching the target value Mend the blood treatment is to be continued with a concentration Cdi of the substance in the dialysis fluid inlet line {22} such that there is no longer any transfer of the substance {3} through the membrane.

Claim 10. (Currently amended) [:] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the control unit {34} is suitable configured for ordering an initial measurement of the blood concentration Cbi with preset treatment parameters and the analyzer unit {32} is suitable configured for determining ~~the an~~ initial value of Cbi, and ~~taking into account this based on the initial value of Cbi,~~ the first admissible value range and the second admissible value range for the blood

treatment, proposing a value for ~~the at least one of a~~ concentration Cdi of the substance in the dialysis fluid inlet line {22}, ~~the and a~~ dialysis fluid flow Qd ~~and/or the and a~~ blood flow Qb.

~~Claim 11.~~ (Currently amended) [:] The blood treatment device according to Claim 10, ~~characterized in that~~ wherein the analyzer unit {32} determines the concentration Cdi ~~based on the basis of~~ the value which corresponds to ~~the a~~ lower limit of the first admissible value range.

~~Claim 12.~~ (Currently amended) [:] The blood treatment device according to Claim 10, ~~characterized in that~~ wherein the analyzer unit {32} determines the concentration Cdi by ~~the an~~ upper limit of the second admissible value range.

~~Claim 13.~~ (Currently amended) [:] The blood treatment device according to Claim 11, ~~characterized in that~~ selection means ~~regarding a prioritization of~~ wherein a selection device for prioritizing the withdrawal {of the substance} are of the substance is provided on ~~the an~~ input device {35} unit by an alignment with the lower limit of the first admissible value range or the upper limit of the second admissible value range.